TITLE 327 WATER POLLUTION CONTROL DIVISION

Final Rule
LSA Document #17-442(F)

DIGEST

Amends 327 IAC 8-2.1-3, 327 IAC 8-2.4-1, 327 IAC 8-2.6-11, 327 IAC 8-2.6-15, and 327 IAC 8-2.6-18 in response to the review and request for correction by the United States Environmental Protection Agency (U.S. EPA). Effective 30 days after filing with the Publisher.

HISTORY

Findings and Determination of the Commissioner Pursuant to IC 13-14-9-8: October 11, 2017, Indiana Register (DIN: 20171011-IR-327170442FDA).

Notice of First Hearing: October 11, 2017, Indiana Register (DIN: 20171011-IR-327170442PHA).

Date of First Hearing: January 10, 2018.

327 IAC 8-2.1-3; 327 IAC 8-2.4-1; 327 IAC 8-2.6-11; 327 IAC 8-2.6-15; 327 IAC 8-2.6-18

SECTION 1. 327 IAC 8-2.1-3 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-3 Content of the reports

Authority: IC 13-13-5; IC 13-14-8; IC 13-18-3; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 3. (a) A CWS shall provide to its customers an annual report that contains the information specified in this section and section 4 of this rule.

(b) The report required under subsection (a) must contain information on the source of the water delivered, including the following:

(1) The source or sources of water delivered by the CWS by including information on the following:

(A) The type of water, such as surface water or ground water.

(B) The commonly used name, if any.

(C) The location of the body or bodies of water.

(2) If ~~as follows: (A)~~ a source water assessment has been completed, the report must notify the consumers of the:

~~(i)~~ **(A)** availability of this information; and

~~(ii)~~ **(B)** means to obtain it.

In addition, a CWS is encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information.

~~(B)~~ **(3) If** a CWS has received a source water assessment from the commissioner, the report must include a brief summary of the CWS's susceptibility to potential sources of contamination, using language:

~~(i)~~ **(A)** provided; or

~~(ii)~~ **(B)** written by the operator and approved;

by the commissioner.

(c) The report required under subsection (a) must include the following definitions:

(1) "Maximum contaminant level" or "MCL" means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(2) "Maximum contaminant level goal" or "MCLG" means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(3) For a report that contains information regarding a level 1 or level 2 assessment required under 40 CFR 141, Subpart Y*, the report must include the following applicable definitions:

(A) "Level 1 assessment" means a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

(B) "Level 2 assessment" means a very detailed study of the water system to identify potential problems and determine, if possible, why either or both of the following has occurred:

(i) An E. coli MCL violation.

(ii) Total coliform bacteria have been found in our water system on multiple occasions.

(d) The report required under subsection (a) that contains data on contaminants that the department or U.S. EPA regulates and uses any of the following terms must include definitions, as applicable, of the terms used:

(1) "Action level" means the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

(2) "Maximum residual disinfectant level" or "MRDL" means the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(3) "Maximum residual disinfectant level goal" or "MRDLG" means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG does not reflect the benefits of the use of disinfectants to control microbial contaminants.

(4) "Treatment technique" means a required process intended to reduce the level of a contaminant in drinking water.

(e) The report required under subsection (a) must include the information specified in this subsection for the following contaminants subject to mandatory monitoring, other than Cryptosporidium:

(1) Contaminants subject to an MCL, action level, or treatment technique, hereafter referred to as regulated contaminants.

(2) Disinfection byproducts or microbial contaminants for which monitoring is required by 40 CFR 141.142* and 40 CFR 141.143*, except as provided in subsection (f)(1) and that are detected in the finished water.

(3) Contaminants for which monitoring is required by 40 CFR 141.40* (unregulated contaminants).

(4) The data relating to these contaminants must be displayed in one (1) table or in several adjacent tables. Any additional monitoring results that a CWS chooses to include in its report must be displayed separately.

(5) The data must be derived from data collected to comply with U.S. EPA and department monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter, except the following:

(A) Where a CWS is allowed to monitor for regulated contaminants less often than once a year, the:

(i) table or tables must include the date and results of the most recent sampling; and

(ii) report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with 327 IAC 8-2, 327 IAC 8-2.3, 327 IAC 8-2.5, 327 IAC 8-2.6, and 40 CFR 141.

No data older than five (5) years need be included.

(B) Results of monitoring in compliance with 40 CFR 141.142* and 40 CFR 141.143* need only be included:

(i) for five (5) years from the date of the last sample; or

(ii) until any of the detected contaminants becomes regulated and subject to routine monitoring requirements;

whichever comes first.

(6) For detected regulated contaminants listed in section 6(a) of this rule, the table or tables must contain the following information:

(A) The MCL for that contaminant expressed as a number equal to or greater than one and zero-tenths (1.0), as listed in section 6(a) of this rule.

(B) The MCLG for that contaminant expressed in the same units as the MCL.

(C) If there is no MCL for a detected contaminant, the:

(i) table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant; and

(ii) report must include the definitions for **the** treatment technique or action level, or both, as appropriate, specified in subsection (d).

(D) For contaminants subject to an MCL, except turbidity, total coliform, fecal coliform, and E. coli, the highest contaminant level used to determine compliance with this rule and the range of detected levels as follows:

(i) When compliance with the MCL is determined annually or less frequently, the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

(ii) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location, a CWS shall report the following:

(AA) The highest average of any of the monitoring locations and the range of all monitoring locations expressed in the same units as the MCL.

(BB) For the MCLs for TTHM and HAA5 in 327 IAC 8-2.5-2(b), a CWS shall include the highest LRAA for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one (1) location exceeds the TTHM or HAA5 MCL, the CWS shall include the LRAAs for all locations that exceed the MCL.

(iii) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations, a CWS shall report the following:

(AA) The average and range of detection expressed in the same units as the MCL.

(BB) Individual sample results for the initial distribution system evaluation (IDSE) conducted under 327 IAC 8-2.5-10 when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.

(E) When turbidity is reported under 327 IAC 8-2-8.5 or 327 IAC 8-2.6-3, the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 327 IAC 8-2-8.5 or 327 IAC 8-2.6-3 for the filtration technology being used. The report must include an explanation of the reasons for measuring turbidity.

(F) For lead and copper, the:

(i) ninetieth percentile value of the most recent round of sampling; and

(ii) number of sampling sites exceeding the action level.

(G) For total coliform analytical results until March 31, 2016, the highest monthly:

(i) number of positive samples for a CWS collecting fewer than forty (40) samples per month; or

(ii) percentage of positive samples for a CWS collecting at least forty (40) samples per month.

(H) For fecal coliform and E. coli until March 31, 2016, the total number of positive samples.

(I) For E. coli analytical results under 40 CFR 141, Subpart Y*, the total number of positive samples.

(J) The likely source or sources of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants:

(i) may be available in sanitary surveys and source water assessments; and

(ii) must be used when available to the operator.

If the operator lacks specific information on the likely source, the report must include one (1) or more of the typical sources for that contaminant listed in section 6(b) of this rule that are most applicable to the CWS.

(7) If a CWS distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources:

(A) the table must contain a separate column for each service area, and the report must identify each separate distribution system; or

(B) the CWS may produce separate reports tailored to include data for each service area.

(8) The table must clearly identify any data indicating violations of MCLs or treatment techniques, and the report must contain a clear and readily understandable explanation of the violation, including the following:

(A) The length of the violation.

(B) The potential adverse health effects.

(C) Actions taken by the CWS to address the violation.

To describe the potential health effects, the CWS shall use the relevant language of section 6(c) of this rule.

(9) For detected unregulated contaminants for which monitoring is required (except Cryptosporidium), the table must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

(f) Each report required under subsection (a) must contain the following information on Cryptosporidium, radon, and other contaminants:

(1) If the CWS has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of 40 CFR 141.143*, that indicates Cryptosporidium may be present in the source water or the finished water, the report must include the following:

(A) A summary of the results of the monitoring.

(B) An explanation of the significance of the results.

(2) If the CWS has performed any monitoring for radon that indicates radon may be present in the finished water, the report must include the following:

(A) The results of the monitoring.

(B) An explanation of the significance of the results.

(3) If the CWS has performed additional monitoring that indicates the presence of other contaminants in the finished water, the commissioner strongly encourages the CWS to report any results that may indicate a health concern. To determine if results may indicate a health concern, the commissioner recommends that the CWS finds out if U.S. EPA has proposed a national primary drinking water regulation (NPDWR) or issued a health advisory for that contaminant by calling the Safe Drinking Water Hotline at (800) 426-4791. The commissioner and U.S. EPA consider levels detected above a proposed federal or state MCL or health advisory level to indicate possible health concerns. For contaminants found through additional monitoring, the commissioner recommends that the report includes the following:

(A) The results of the monitoring.

(B) An explanation of the significance of the results noting the existence of a health advisory or a proposed

regulation.

(g) In addition to the requirements of subsection (e)(6), the report required under subsection (a) must note any violation of a requirement listed in this subsection that occurred during the year covered by the report and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the CWS has taken to correct the violation. Violations of the following requirements must be included:

(1) Monitoring and reporting of compliance data.

(2) Filtration and disinfection prescribed by 327 IAC 8-2-8.5 and 327 IAC 8-2-8.6. For a CWS that has:

(A) failed to install adequate filtration or disinfection equipment or processes; or

(B) had a failure of filtration or disinfection equipment or processes that constitutes a violation;

the report must include the following language as part of the explanation of potential health effects, "inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.".

(3) Lead and copper control requirements prescribed by 327 IAC 8-2-36 through 327 IAC 8-2-47. For a CWS that fails to take one (1) or more actions prescribed by 327 IAC 8-2-36(d) or 327 IAC 8-2-40 through 327 IAC 8-2-43, the report must include the applicable language from section 6(c) of this rule for lead or copper, or both.

(4) Treatment techniques for acrylamide and epichlorohydrin prescribed by 327 IAC 8-2-35. For a CWS that violates 327 IAC 8-2-35, the report must include the relevant language from section 6(c) of this rule.

(5) Record keeping of compliance data.

(6) Special monitoring requirements prescribed by 327 IAC 8-2-21.

(7) Violation of the terms of an administrative or judicial order.

(h) The report required under subsection (a) must contain the following additional information:

(1) A brief explanation regarding contaminants that may reasonably be expected to be found in drinking water, including bottled water. This explanation may include the language in clauses (A) through (C), or a CWS may use its own comparable language. The report required under subsection (a) must also include the language of clause (D). The language is as follows:

(A) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it:

(i) dissolves naturally-occurring minerals and, in some cases, radioactive material; and

(ii) can pick up substances resulting from the presence of animals or from human activity.

(B) Contaminants that may be present in source water include the following:

(i) Microbial contaminants, such as viruses and bacteria, that may come from the following:

(AA) Sewage treatment plants.

(BB) Septic systems.

(CC) Agricultural livestock operations.

(DD) Wildlife.

(ii) Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from any of the following:

(AA) Urban stormwater runoff.

(BB) Industrial or domestic wastewater discharges.

(CC) Oil and gas production.

(DD) Mining.

(EE) Farming.

(iii) Pesticides and herbicides that may come from a variety of sources, such as the following:

(AA) Agriculture.

(BB) Urban storm water runoff.

(CC) Residential uses.

(iv) Organic chemical contaminants, including synthetic and volatile organic chemicals, that:

(AA) are byproducts of industrial processes and petroleum production; and

(BB) can also come from gas stations, urban storm water run-off, and septic systems.

(v) Radioactive contaminants that can be:

(AA) naturally-occurring; or

(BB) the result of oil and gas production and mining activities.

(C) In order to ensure that tap water is safe to drink, the department and U.S. EPA prescribe regulations that limit the amount of certain contaminants in water provided by PWS. Federal Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

(D) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

(2) The telephone number of the owner, operator, or designee of the CWS as a source of additional information concerning the report.

(3) In communities with a large proportion of non-English speaking residents, in which twenty percent (20%) or more of the residents speak the same language other than English, the report must contain:

(A) information in the appropriate language or languages regarding the importance of the report; or

(B) a telephone number or address where the residents may contact the CWS to obtain:

(i) a translated copy of the report; or

(ii) assistance in the appropriate language.

(4) The report required under subsection (a) must include information about opportunities for public participation in decisions that may affect the quality of water. This information may include, but is not limited to, the time and place of regularly scheduled board meetings.

(5) The CWS may include any additional information as the CWS deems necessary for public education consistent with, and not detracting from, the purpose of the report.

(6) A CWS required to comply with 327 IAC 8-2.3 shall provide the following notices, where applicable:

(A) A CWS using ground water that receives notice from the commissioner of a significant deficiency or notice from a laboratory of a fecal indicator-positive ground water source sample that is not invalidated by the commissioner under 327 IAC 8-2.3-4(d) shall inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive ground water source sample in the next report. The CWS using ground water shall continue to inform the public annually until the commissioner determines that particular significant deficiency is corrected or the fecal contamination in the ground water source is addressed under 327 IAC 8-2.3-5(a). Each report must include the following elements:

(i) The nature of the particular significant deficiency or the source of the fecal contamination, if known, and the date the significant deficiency was identified by the commissioner or the dates of the fecal indicator-positive ground water source samples.

(ii) Whether the fecal contamination in the ground water source has been addressed under 327 IAC 8-2.3-5(a) and the date of the action.

(iii) For each significant deficiency or fecal contamination in the ground water source that has not been addressed under 327 IAC 8-2.3-5(a), the commissioner-approved plan and schedule for correction, including the following:

(AA) Interim measures.

(BB) Progress to date.

(CC) Any interim measures completed.

(iv) If the CWS using ground water receives notice of a fecal indicator-positive ground water source sample that is not invalidated by the commissioner under 327 IAC 8-2.3-4(d), the potential health effects using the health effects language of section 17 of this rule.

(B) If directed by the commissioner, a CWS with significant deficiencies that have been corrected before the next report is issued shall inform its customers of the following:

(i) The significant deficiency.

(ii) How the deficiency was corrected.

(iii) The date of the correction under clause (A).

(7) A CWS required to comply with 40 CFR 141, Subpart Y*, shall provide the following notices, as applicable:

(A) Any CWS required to comply with the level 1 assessment requirement or a level 2 assessment requirement, if the level 2 assessment is not due to an E. coli MCL violation, shall include text in the report as described in the following:

(i) The required report must state, "Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.".

(ii) The report referenced under item (i) must include the following text, as appropriate, with completed blanks:

(AA) "During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s). [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF COMPLETED

CORRECTIVE ACTIONS] of these actions."

(BB) "During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] level 2 assessments were required to be completed for our water system. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF COMPLETED CORRECTIVE ACTIONS] of these actions."

(iii) A CWS that has failed to complete all the required assessments, correct all identified sanitary defects, or is in violation of the treatment technique requirement under 40 CFR 141.859(a)*, must include in the report referenced under item (i) one (1) or both of the following statements, as appropriate:

(AA) "During the past year, we failed to conduct all of the required assessment(s)."

(BB) "During the past year, we failed to correct all identified defects that were found during the assessment(s)."

(B) Any CWS required to conduct a level 2 assessment due to an E. coli MCL violation shall include text in the report as described in the following:

(i) Each required report must include the following text with completed blanks:

(AA) "E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments."

(BB) "We were required to complete a level 2 assessment because we found E. coli in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF COMPLETED CORRECTIVE ACTIONS] of these actions."

(ii) A CWS that has failed to complete the required assessment, correct all identified sanitary defects, or is in violation of the treatment technique requirement under 40 CFR 141.859(a)*, must include in the report referenced under item (i) one (1) or both of the following statements, as appropriate:

(AA) "We failed to conduct the required assessment."

(BB) "We failed to correct all sanitary defects that were identified during the assessments we conducted."

(C) If a CWS detects E. coli and has violated the E. coli MCL, in addition to completing the table as required under subsection (e)(4) **with the information required under subsection (e)(6),** the CWS must include one (1) or more of the following statements to describe any noncompliance, as applicable:

(i) "We had an E. coli-positive repeat sample following a total coliform-positive routine sample."

(ii) "We had a total coliform-positive repeat sample following an E. coli-positive routine sample."

(iii) "We failed to take all required repeat samples following an E. coli-positive routine sample."

(iv) "We failed to test for E. coli when any repeat sample tests positive for total coliform."

(D) If a CWS detects E. coli and has not violated the E. coli MCL, in addition to completing the table as required under subsection (e)(4), the CWS may include a statement that explains that, although the CWS has detected E. coli, the CWS is not in violation of the E. coli MCL.

*These documents are incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.1-3; filed Mar 22, 2000, 3:23 p.m.: 23 IR 1899; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3982; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1098; filed May 1, 2003, 12:00 p.m.: 26 IR 2818; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3223; errata filed Jul 6, 2005, 3:15 p.m.: 28 IR 3583; errata filed Feb 6, 2006, 11:15 a.m.: 29 IR 1937; filed Jul 13, 2007, 11:58 a.m.: 20070808-IR-327060044FRA; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA; filed Jan 18, 2017, 1:01 p.m.: 20170215-IR-327140059FRA; filed May 18, 2018, 2:23 p.m.: 20180613-IR-327170442FRA)

SECTION 2. 327 IAC 8-2.4-1 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.4-1 Revised total coliform rule incorporated by reference

Authority: IC 13-13-5; IC 13-14-8; IC 13-18-3; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 1. (a) A reference to a provision of the Code of Federal Regulations (CFR) means the July 1, ~~2015,~~ **2016,** edition.

(b) 40 CFR 141, Subpart Y* is incorporated by reference.

(c) If a requirement incorporated by reference in subsection (b) conflicts with or is inconsistent with a requirement in 327 IAC 8-2, 327 IAC 8-2.1, 327 IAC 8-2.3, or 327 IAC 8-2.5, then the requirement incorporated by reference in subsection (b) applies.

(d) When used in 40 CFR 141, Subpart Y, as incorporated by reference under this rule, the following definitions apply:

(1) "Clean compliance history" means a record of none of the following:
  (A) MCL violations under 327 IAC 8-2-7 and this rule.
  (B) Monitoring violations under 327 IAC 8-2-8.3, 327 IAC 8-2-8.4, and this rule.
  (C) Coliform treatment technique trigger exceedances or treatment technique violations under this rule.

(2) "Level 1 assessment" means an evaluation conducted by the PWS operator or owner to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the PWS triggered the assessment. Minimum elements include the following:
  (A) Review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired.
  (B) Changes in distribution system maintenance and operation that could affect distributed water quality, including water storage.
  (C) Source and treatment considerations that, where appropriate, bear on distributed water quality, for example, whether a PWS using ground water is disinfected.
  (D) Existing water quality monitoring data.
  (E) Inadequacies in the following:
    (i) Sample sites.
    (ii) Sampling protocol.
    (iii) Sample processing.
  The PWS must conduct the assessment consistent with any directives from the commissioner that tailor specific assessment elements with respect to the size and type of the PWS and size, type, and characteristics of the distribution system.

(3) "Level 2 assessment" means an evaluation conducted by an individual approved by the commissioner, which may include the PWS operator, to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the PWS triggered the assessment. A level 2 assessment provides a more detailed examination of the PWS, including the PWS's monitoring and operational practices, than does a level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. Minimum elements include the following:
  (A) Review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired.
  (B) Changes in distribution system maintenance and operation that could affect distributed water quality, including water storage.
  (C) Source and treatment considerations that, where appropriate, bear on distributed water quality, for example, whether a PWS using ground water is disinfected.
  (D) Existing water quality monitoring data.
  (E) Inadequacies in the following:
    (i) Sample sites.
    (ii) Sampling protocol.
    (iii) Sample processing.
  The PWS must conduct the assessment consistent with any directives from the commissioner that tailor specific assessment elements with respect to the **size and type of the system and** size, type, and characteristics of the distribution system. The PWS must comply with any expedited actions or additional actions required by the commissioner in the case of an E. coli MCL violation.

(4) "Primacy agency" means the department of environmental management where the department exercises primary enforcement responsibility as granted by the United States Environmental Protection Agency.

(5) "Sanitary defect" means a defect that:
  (A) could provide a pathway of entry for microbial contamination into the distribution system; or
  (B) is indicative of:

(i) a failure; or
(ii) an imminent failure;
in a barrier that is already in place.
(6) "Seasonal system" is an NCWS that:
(A) is not operated as a PWS on a year-round basis; and
(B) starts up and shuts down at the beginning and end of each operating season.

*These documents are incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.4-1; filed Jan 18, 2017, 1:01 p.m.: 20170215-IR-327140059FRA; filed May 18, 2018, 2:23 p.m.: 20180613-IR-327170442FRA)

SECTION 3. 327 IAC 8-2.6-11 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.6-11 Bin classification for filtered systems; treatment technique requirements; enhanced treatment for Cryptosporidium

Authority: IC 13-13-5; IC 13-14-8; IC 13-14-9; IC 13-18-3; IC 13-18-16
Affected: IC 13-18-3-11

Sec. 11. (a) Following completion of the initial round of source water monitoring required under 40 CFR 141.701(a), as incorporated by reference in section 8(a)(1) of this rule, each filtered PWS shall calculate an initial Cryptosporidium bin concentration for each plant for which monitoring was required by:
(1) using the Cryptosporidium results reported under 40 CFR 141.701(a), as incorporated by reference in section 8(a)(1) of this rule; and
(2) following the procedures in subsection (b).

(b) The following calculations shall be used to determine bin concentrations for the PWS as described:
(1) For a PWS that collects at least forty-eight (48) samples, the bin concentration is equal to the arithmetic mean of all sample concentrations.
(2) For a PWS that collects at least twenty-four (24) samples, but not more than ~~forty-eight (48)~~ **forty-seven (47)** samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any twelve (12) consecutive months during which Cryptosporidium samples were collected.
(3) For a PWS serving fewer than ten thousand (10,000) people that monitors for Cryptosporidium for only one (1) year, the bin concentration is equal to the arithmetic mean of all sample concentrations.
(4) For a PWS that has a plant that:
(A) operates only part of the year; and
(B) monitors fewer than twelve (12) months per year under 40 CFR 141.701(e), as incorporated in section 8(a)(1) of this rule;
the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of Cryptosporidium monitoring.
(5) If the monthly Cryptosporidium sampling frequency varies, a PWS shall:
(A) first calculate a monthly average for each month of monitoring; and
(B) then use the monthly average concentrations calculated under clause (A), rather than individual sample concentrations, in the applicable calculation for bin classification in subdivisions (1) through (4).

(c) A filtered system shall determine its initial bin classification from the following table and using the Cryptosporidium bin concentration calculated under subsections (a) and (b):

Table 11

For systems that are:	With a Cryptosporidium bin concentration of:[1]	The bin classification is:
Required to monitor for Cryptosporidium under 40 CFR 141.701, as incorporated by reference in section 8(a)(1) of this rule.	Cryptosporidium < 0.075 oocysts/L	Bin 1
	0.075 oocysts/L ≤ Cryptosporidium < 1.0 oocysts/L	Bin 2
	1.0 oocysts/L ≤ Cryptosporidium < 3.0 oocysts/L	Bin 3
	Cryptosporidium ≥3.0 oocysts/L	Bin 4

Serving fewer than 10,000 people and NOT required to monitor for Cryptosporidium under 40 CFR 141.701(a)(4), as incorporated by reference in section 8(a)(1) of this rule.	NA	Bin 1

[1]Based on calculations in subsection (a) or (d), as applicable.

(d) Following completion of the second round of source water monitoring required under 40 CFR 141.701(b), as incorporated by reference in section 8(a)(1) of this rule, a filtered PWS shall do the following:
(1) Recalculate its Cryptosporidium bin concentration using the Cryptosporidium results reported under 40 CFR 141.701(b), as incorporated by reference in section 8(a)(1) of this rule and following the procedures in subsection (b)(1) through (b)(4).
(2) Redetermine its bin classification using the bin concentration calculated under subdivision (1) and Table 11 in subsection (c).

(e) A filtered PWS shall report its bin classifications as follows:
(1) A PWS shall report its initial bin classification under subsection (c) to the commissioner for approval not later than six (6) months after the PWS is required to complete initial source water monitoring based on the schedule in 40 CFR 141.701(c), as incorporated by reference in section 8(a)(1) of this rule.
(2) A PWS shall report its bin classification under subsection (d) to the commissioner for approval not later than six (6) months after the PWS is required to complete the second round of source water monitoring based on the schedule in 40 CFR 141.701(c), as incorporated by reference in section 8(a)(1) of this rule.
(3) The bin classification report to the commissioner must include the following:
(A) A summary of source water monitoring data.
(B) The calculation procedure used to determine bin classification.

(f) Failure to comply with the conditions of subsection (e):
(1) is a violation of the treatment technique requirement; and
(2) requires public notification under 327 IAC 8-2.1.

(Water Pollution Control Division; 327 IAC 8-2.6-11; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA; filed May 18, 2018, 2:23 p.m.: 20180613-IR-327170442FRA)

SECTION 4. 327 IAC 8-2.6-15 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.6-15 Microbial toolbox options for meeting Cryptosporidium treatment requirements; requirements for microbial toolbox components; enhanced treatment for Cryptosporidium

Authority: IC 13-13-5; IC 13-14-8; IC 13-14-9; IC 13-18-3; IC 13-18-16
Affected: IC 13-18-3-11

Sec. 15. (a) A PWS ~~may:~~ **shall:**
(1) receive the treatment credits listed under Table 15 in subsection (b) by meeting the conditions for microbial toolbox options described in sections 16 through 20 of this rule; and
(2) apply the treatment credits received under subdivision (1) to meet the treatment requirements in section 12 of this rule.

(b) The following table summarizes options in the microbial toolbox:

Table 15
Microbial Toolbox Summary Table: Options, Treatment Credits, and Criteria

Toolbox Option	Cryptosporidium treatment credit with design and implementation criteria
Source Protection and Management Toolbox Options	
Watershed Control Plan	0.5-log credit for commissioner-approved program comprising required elements, annual program status, report to commissioner, and regular watershed survey. Specific criteria are under section 16(a) of this rule.
Alternative source/intake management	No prescribed credit. Systems may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies. Specific criteria are under

	section 16(b) of this rule.
Prefiltration Toolbox Options	
Presedimentation basin with coagulation	0.5-log credit during any month that presedimentation basins achieve a monthly mean reduction of 0.5-log or greater in turbidity or alternative commissioner-approved performance criteria. To be eligible, basins must be operated continuously with coagulant addition and all plant flow must pass through the basins. Specific criteria are under section 17(a) of this rule.
Two-stage lime softening	0.5-log credit for two-stage lime softening where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment. Specific criteria are under section 17(b) of this rule.
Bank filtration	0.5-log credit for 25-foot setback; 1-log credit for 50-foot setback; aquifer must be unconsolidated sand containing at least 10% fines; average turbidity in wells must be less than one NTU. Systems using wells followed by filtration, when conducting source water monitoring must sample the well to determine bin classification and are not eligible for additional credit. Specific criteria are under section 17(b) of this rule.
Treatment performance toolbox options	
Combined filter performance	0.5-log credit for combined filter effluent turbidity less than or equal to 0.15 NTU in at least 95% of measurements each month. Specific criteria are in section 18(a) of this rule.
Individual filter performance	0.5-log credit (in addition to 0.5-log combined filter performance credit) if individual filter effluent turbidity is less than or equal to 0.15 NTU in at least 95% of samples each month in each filter and never greater than 0.3 NTU in two consecutive measurements in any filter. Specific criteria are under section 18(b) of this rule.
Demonstration of performance	Credit awarded to unit processes or treatment train based on a demonstration to the commissioner with a commissioner-approved protocol. Specific criteria are under section 18(c) of this rule.
Additional filtration toolbox options	
Bag or cartridge filters (individual filters)	Up to 2-log credit based on the removal efficiency demonstrated during challenge testing with a 1.0-log factor of safety. Specific criteria are under section 19(a) of this rule.
Bag or cartridge filters (in series)	Up to 2.5-log credit based on the removal efficiency demonstrated during challenge testing with a 0.5-log factor of safety. Specific criteria are under section 19(a) of this rule.
Membrane filtration	Log credit equivalent to removal efficiency demonstrated in challenge test for device if supported by direct integrity testing. Specific criteria are under section 19(b) of this rule.
Second stage filtration	0.5-log credit for second separate granular media filtration stage if treatment train includes coagulation prior to first filter. Specific criteria are under section 19(c) of this rule.
Slow sand filters	2.5-log credit as a secondary filtration step; 3.0-log credit as a primary filtration process. No prior chlorination for either option. Specific criteria are under section 19(d) of this rule.
Inactivation toolbox options	
Chlorine dioxide	Log credit based on measured CT in relation to CT table. Specific criteria are under section 20(b) of this rule.
Ozone	Log credit based on measured CT in relation to CT table. Specific criteria are under section 20(b) of this rule.
UV	Log credit based on validated UV dose in relation to UV dose table; reactor validation testing required to establish UV dose and associated operating conditions. Specific criteria are under section 20(d) of this rule.

(Water Pollution Control Division; 327 IAC 8-2.6-15; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA; filed May 18, 2018, 2:23 p.m.: 20180613-IR-327170442FRA)

SECTION 5. 327 IAC 8-2.6-18 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.6-18 Treatment performance toolbox options; requirements for microbial toolbox components; enhanced treatment for Cryptosporidium

Authority: IC 13-13-5; IC 13-14-8; IC 13-14-9; IC 13-18-3; IC 13-18-16
Affected: IC 13-18-3-11

Sec. 18. (a) A PWS using conventional filtration treatment or direct filtration treatment ~~may~~ **shall** receive an additional 0.5-log Cryptosporidium treatment credit during any month the system meets the following:

(1) Combined filter effluent (CFE) turbidity must be less than or equal to fifteen-hundredths (0.15) NTU in at least ninety-five percent (95%) of the measurements recorded each month.

(2) Turbidity must be measured as described in 327 IAC 8-2-8.7(4).

(b) A PWS using conventional filtration treatment or direct filtration treatment may receive a 0.5-log Cryptosporidium treatment credit, which may be in addition to the 0.5-log credit under subsection (a), during any month the PWS meets the following criteria that must be based on monitoring as described in section 4 of this rule, as applicable:

(1) The filtered water turbidity for each individual filter must be less than or equal to fifteen-hundredths (0.15) NTU in at least ninety-five percent (95%) of the measurements recorded each month.

(2) No individual filter may have a measured turbidity greater than three-tenths (0.3) NTU in two (2) consecutive measurements taken fifteen (15) minutes apart.

(3) A PWS that has received credit for individual filter performance and fails to meet the requirements of subdivision (1) or (2) during any month will not receive a treatment technique violation under section 12(c) of this rule if the commissioner determines that the following conditions exist:

(A) The failure was due to unusual and short-term circumstances that could not reasonably be prevented through optimizing treatment plant:

(i) design;

(ii) operation; or

(iii) maintenance.

(B) The PWS has experienced not more than two (2) failures under this subsection in any calendar year.

(c) Cryptosporidium treatment credit for drinking water treatment processes may be awarded to a PWS according to the following:

(1) Credits may be approved by the commissioner based on a demonstration of performance study or continuing operation that meets the following criteria:

(A) A PWS may not receive the prescribed credit for any toolbox option in section 17 of this rule, this section, and sections 19 and 20 of this rule if that toolbox option is included in a demonstration of performance study for which treatment credit is awarded under this subsection.

(B) The demonstration of performance study must:

(i) follow a protocol approved by the commissioner; and

(ii) demonstrate the level of Cryptosporidium reduction the treatment process will achieve under the full range of expected operating conditions for the PWS.

(C) Approval by the commissioner of the demonstration of performance study:

(i) must be in writing; and

(ii) may include monitoring and treatment performance criteria that:

(AA) shall be demonstrated and reported by the PWS to the commissioner on an ongoing basis in order to remain eligible for the treatment credit; and

(BB) the commissioner may designate, where necessary, to verify that routine operation continues to reflect the conditions under which the demonstration of performance credit was approved.

(2) The treatment credits may be:

(A) greater than or less than the prescribed treatment credits in section 12 or 17 of this rule, this section, and sections 19 and 20 of this rule; and

(B) awarded to treatment processes that do not meet the criteria for the prescribed credits.

(Water Pollution Control Division; 327 IAC 8-2.6-18; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA; filed May 18, 2018, 2:23 p.m.: 20180613-IR-327170442FRA)

LSA Document #17-442(F)
Findings and Determination of the Commissioner Pursuant to IC 13-14-9-8: 20171011-IR-327170442FDA
Hearing Held: January 10, 2018
Approved by Attorney General: May 2, 2018
Approved by Governor: May 15, 2018
Filed with Publisher: May 18, 2018, 2:23 p.m.

Documents Incorporated by Reference: 40 CFR 141, Subpart Y, Revised Total Coliform Rule (7-1-16 Edition)
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Posted: 06/13/2018 by Legislative Services Agency
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